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SPLIT-TYPE, HEAT PUMP AIR CONDITIONERS

No. OC303

TECHNICAL & SERVICE MANUAL

Series SEZ Ceiling Concealed R410A

Indoor unit
[Model names]

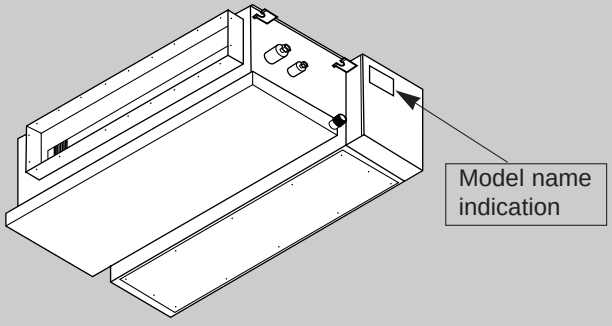
[Service Ref.]

SEZ-A12AR — **SEZ-A12AR.TH**

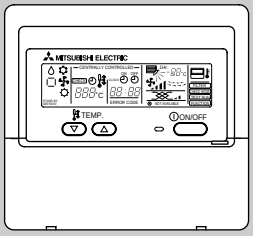
SEZ-A18AR — **SEZ-A18AR.TH**

SEZ-A24AR — **SEZ-A24AR.TH**

•This manual does not cover the following outdoor units. When servicing them, please refer to the service manual No.OC304 and this manual in a set.



INDOOR UNIT



WIRED REMOTE CONTROLLER

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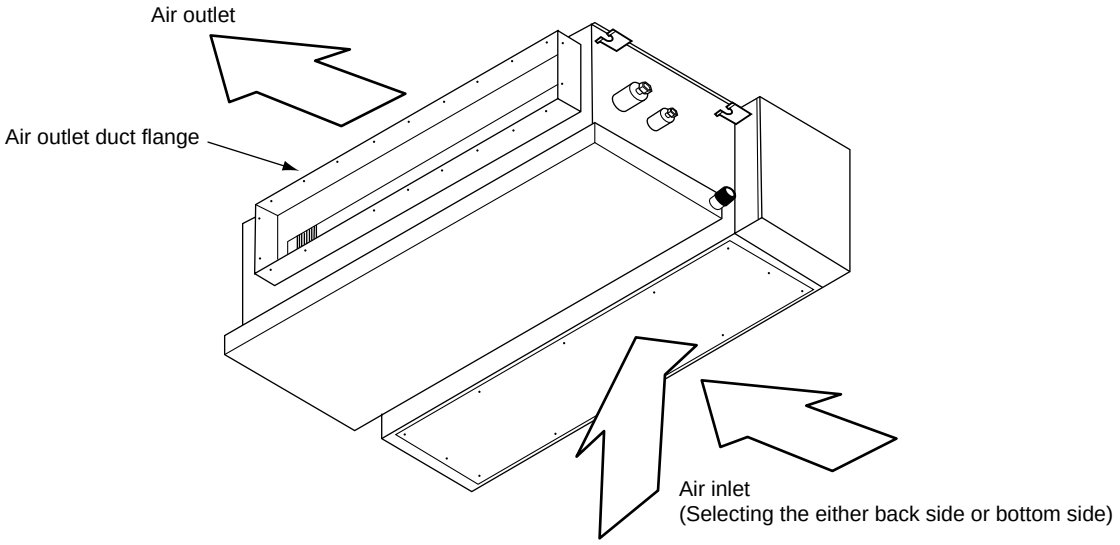
1 PART NAMES AND FUNCTIONS

Indoor Unit
SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH



Wired remote controller
On the controls are set, the same operation mode can be repeated by simply pressing the ON/OFF button.

● **Operation buttons**

TEMP. ADJUSTMENT button
This sets the room temperature. The temperature setting can be performed in 1℃ units
Setting range
Cooling 19℃ to 30℃
Heating 17℃ to 28℃

TIME SETTING button
This sets the current time, start time and stop time.

FAN SPEED button
This sets the ventilation fan speed.

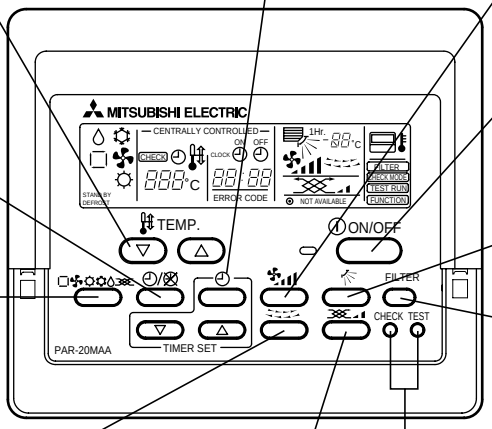
ON/OFF button
This switches between the operation and stop modes each time it is pressed. The lamp on this button lights during operation.

TIMER button
This switches between continuous operation and the timer operation.

AIR DIRECTION button
This adjusts the vertical angle of the ventilation.
(Not available for this model.)

OPERATION SWITCH button
Press this button to switch the cooling, electronic dry (dehumidify), automatic and heating modes.

FILTER button
This resets the filter service indication display

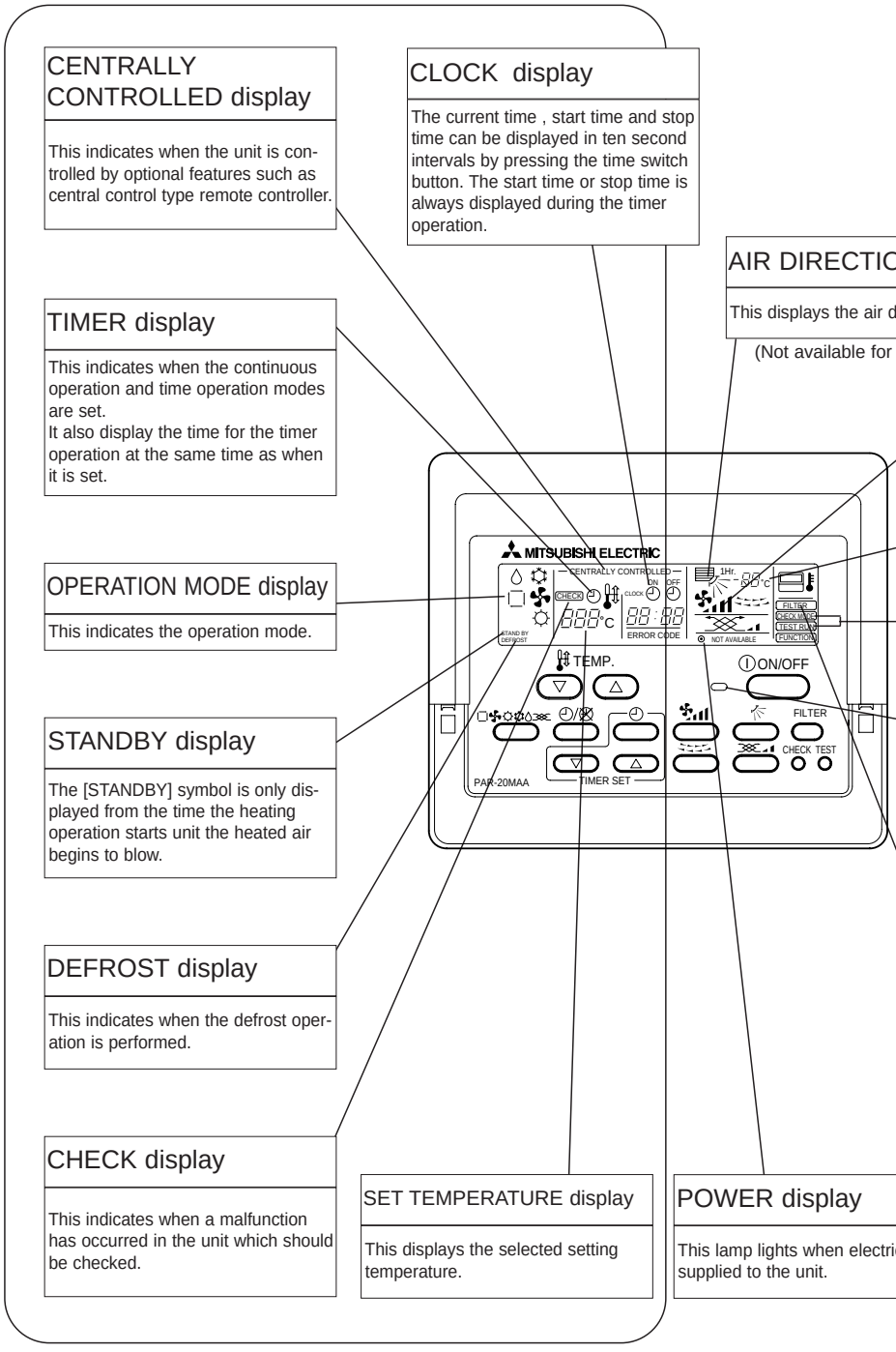


LOUVER button
This switch the horizontal fan motion ON and OFF.
(Not available for this model.)

VENTILATION button
This sets the ventilation fan speed.
(Not available for this model.)

CHECK-TEST RUN button
Only press this button to perform an inspection check or test operation. Do not use it for normal operation.

● Display



CENTRALLY CONTROLLED display

This indicates when the unit is controlled by optional features such as central control type remote controller.

CLOCK display

The current time , start time and stop time can be displayed in ten second intervals by pressing the time switch button. The start time or stop time is always displayed during the timer operation.

In this display example on the bottom left, a condition where all display lamps light is shown for explanation purposes although this differs from actual operation.

AIR DIRECTION display

This displays the air direction.

(Not available for this model.)

TIMER display

This indicates when the continuous operation and time operation modes are set.
It also display the time for the timer operation at the same time as when it is set.

AIR SPEED display

The selected fan speed is displayed.

ROOM TEMPERATURE display

The temperature of the suction air is displayed during operation. The display range is 8°C to 39°C. The display flashes 8°C when the actual temperature is less than 8°C and flashes 39°C when the actual temperature is greater than 39°C.

OPERATION MODE display

This indicates the operation mode.

STANDBY display

The [STANDBY] symbol is only displayed from the time the heating operation starts unit the heated air begins to blow.

Operation lamp

This lamp lights during operation, goes off when the unit stops and flashes when a malfunction occurs.

CHECK MODE / TEST RUN display

This display lights in the check mode or when a test operation is performed.

DEFROST display

This indicates when the defrost operation is performed.

FILTER display

This lamp lights when the filter need to be cleaned.

CHECK display

This indicates when a malfunction has occurred in the unit which should be checked.

SET TEMPERATURE display

This displays the selected setting temperature.

POWER display

This lamp lights when electricity is supplied to the unit.

Caution

- Only the Power display lights when the unit is stopped and power supplied to the unit.
- When the central control remote control unit, which is sold separately, is used the ON-OFF button, operation switch button and TEMP. adjustment button do not operate.
- “NOT AVAILABLE” is displayed when the Air speed button are pressed.This indicates that this room unit is not equipped with the fan direction adjustment function and the louver function.
- When power is turned ON for the first time, it is normal that “H0” is displayed on the room temperature indication (For max. 2minutes). Please wait until this “H0” indication disappear then start the operation.

2 SPECIFICATIONS

Indoor model			SEZ-A12AR.TH		SEZ-A18AR.TH	
Function			Cooling	Heating	Cooling	Heating
Power supply			Single phase 230V, 50Hz		Single phase 230V, 50Hz	
Capacity	Air flow (High/Low)	m³ /h	780/600		1020/720	
Electrical data	Power outlet	A	10		20	
	Running current ✻1	A	0.21		0.27	
	Power input Rated frequency	W	33		49	
	Auxiliary heater	A(kW)	—		—	
	Power factor ✻1	%	94	95	97	98
	Fan motor current ✻1	A	0.21		0.27	
Fan motor	Model		PK6V19-EF		PK6V32-EF	
	Winding resistance (at20℃)	Ω	WHT-BLK : 251.4 BLK-BLU : 19.9 BLU-YLW : 26.5 YLW-BRN : 13.2 BRN-RED : 50.0		WHT-BLK : 161.9 BLK-BLU : 50.3 BLU-YLW : 18.7 YLW-BRN : 8.0 BRN-RED : 39.2	
	Dimensions W×H×D	mm	1100×270×700		1100×270×700	
	Weight	kg	33.5		33.5	
Special remarks	Air direction		1		1	
	Sound level (High/Low)	dB(A)	35/30		39/31	
	Fan speed (High/Low)	rpm	770/630		840/640	
	Fan speed regulator		3		3	
	Thermistor RT11 (at 25℃)	kΩ	10		10	
	Thermistor RT12 (at 25℃)	kΩ	10		10	
	Thermistor RT13 (at 25℃)	kΩ	10		10	
Remote controller model			PAR-20MAA		PAR-20MAA	

NOTE : Test conditions are based on ISO 5151
Cooling : Indoor D.B. 27℃ W.B. 19℃
Outdoor D.B. 35℃ W.B. 24℃
Heating : Indoor D.B. 20℃ W.B. 5℃
Outdoor D.B. 7℃ W.B. 6℃
Refrigerant piping length (one way): 5m
✻1 Measured under rated operating frequency.

Specifications and rating conditions of main electric parts

INDOOR UNIT

Item \ Model	SEZ-A12AR.TH SEZ-A18AR.TH SEZ-A24AR.TH
Indoor fan capacitor (C1)	SEZ-A12/18AR.TH : 2.5μF 440V SEZ-A24AR.TH : 3.0μF 440V
Fuse (FUSE)	250V 3.15A
Varistor (ZNR1)	ERZV10D471
Terminal block (TB)	POWER SUPPLY : 3P TO OUTDOOR UNIT : 4P
Contactor (52C)	G4A-1A-E-PS 12V DC
Indoor fan motor thermal fuse	145℃±2℃

Indoor model			SEZ-A24AR.TH	
Function			Cooling	Heating
Power supply			Single phase 230V, 50Hz	
Capacity	Air flow (High/Low)	m³ /h	1200/720	
Electrical data	Power outlet	A	20	
	Running current ✻1	A	0.34	
	Power input Rated frequency	W	64	
	Auxiliary heater	A(kW)	—	
	Power factor ✻1	%	98	98
	Fan motor current ✻1	A	0.34	
Fan motor	Model		PK6V50-EF	
	Winding resistance (at20℃)	Ω	WHT-BLK : 101.1 BLK-BLU : 56.1 BLU-YLW : 14.7 YLW-BRN : 6.7 BRN-RED : 28.2	
	Dimensions W×H×D	mm	1100×270×700	
	Weight	kg	33.5	
Special remarks	Air direction		1	
	Sound level(High/Low)	dB(A)	43/32	
	Fan speed(High/Low)	rpm	890/660	
	Fan speed regulator		3	
	Thermistor RT11 (at 25℃)	kΩ	10	
	Thermistor RT12 (at 25℃)	kΩ	10	
	Thermistor RT13 (at 25℃)	kΩ	10	
	Remote controller model		PAR-20MAA	

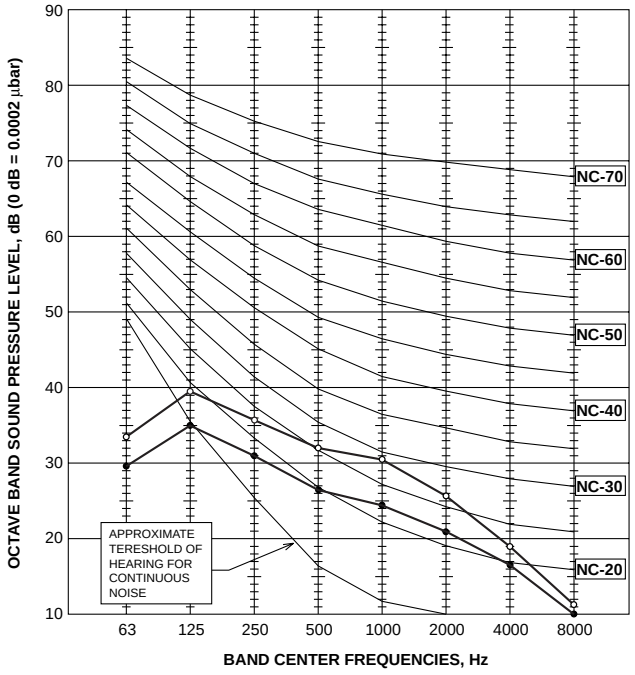
NOTE : Test conditions are based on ISO 5151
Cooling : Indoor D.B. 27℃ W.B. 19℃
Outdoor D.B. 35℃ W.B. 24℃
Heating : Indoor D.B. 20℃ W.B. 15℃
Outdoor D.B. 7℃ W.B. 6℃
Refrigerant piping length (one way): 5m
✻1 Measured under rated operating frequency.

NOISE CRITERION CURVES

SEZ-A12AR.TH

<50Hz>

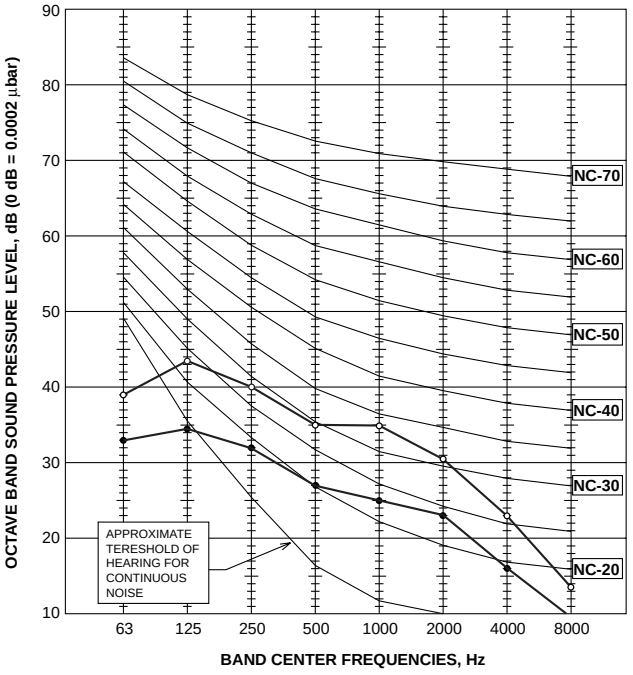
NOTCH	SPL(dB)	LINE
Hi	35	○——○
Lo	30	●——●



SEZ-A18AR.TH

<50Hz>

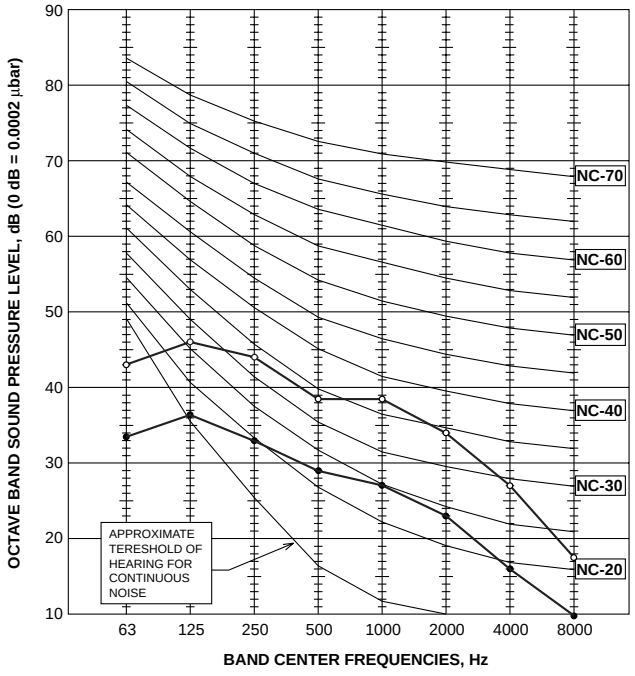
NOTCH	SPL(dB)	LINE
Hi	39	○——○
Lo	31	●——●

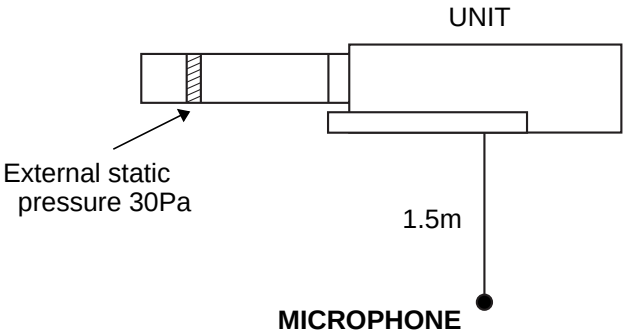


SEZ-A24AR.TH

<50Hz>

NOTCH	SPL(dB)	LINE
Hi	43	○——○
Lo	32	●——●



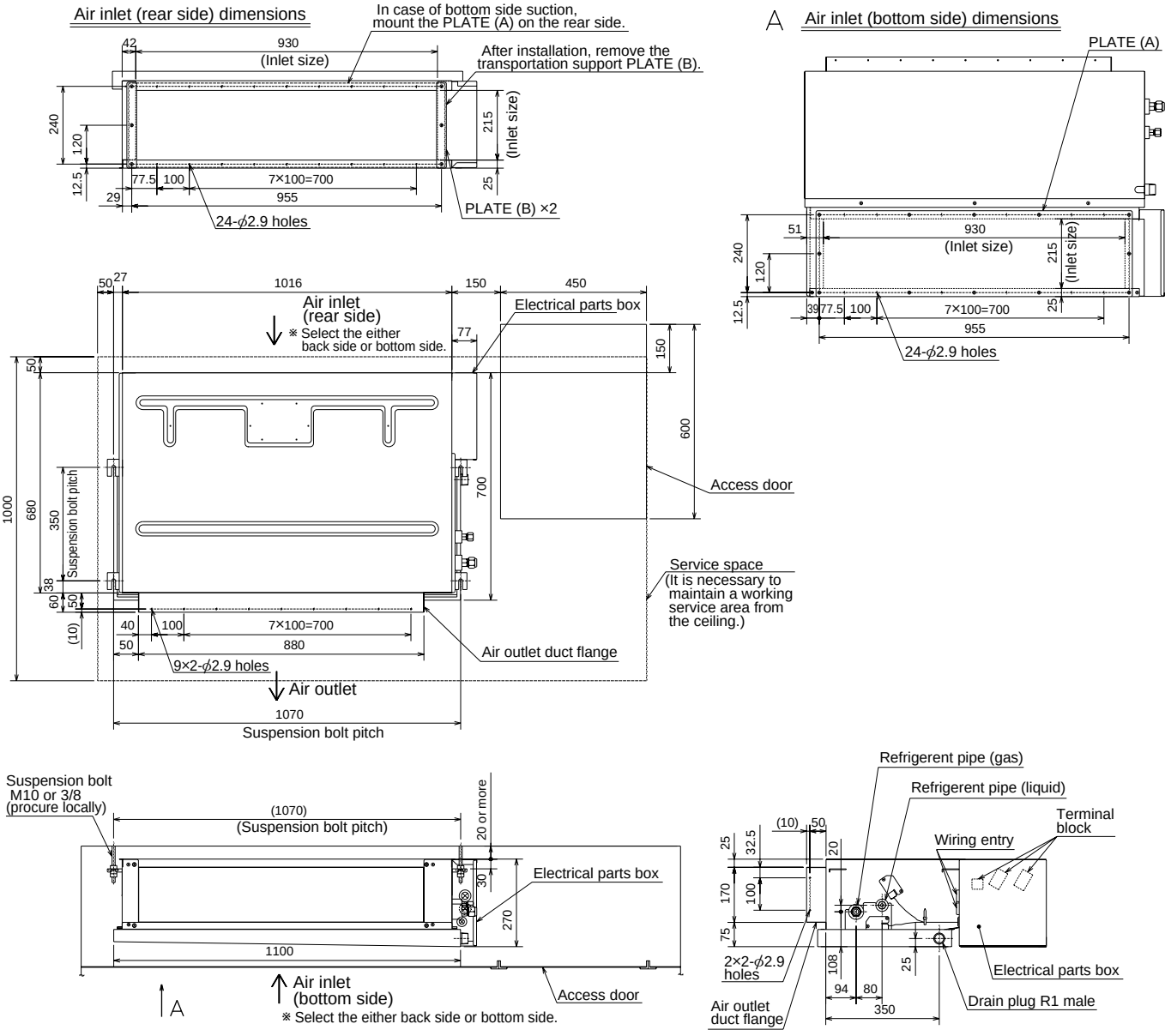


NOTE: The sound level is measured in an anechoic room where echoes are few, when compressor stops. The sound may be bigger than displayed level under actual installation condition by surrounding echoes. The sound level can be higher by about 2 dB than the displayed level during cooling and heating operation.

3 OUTLINES AND DIMENSIONS

SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH

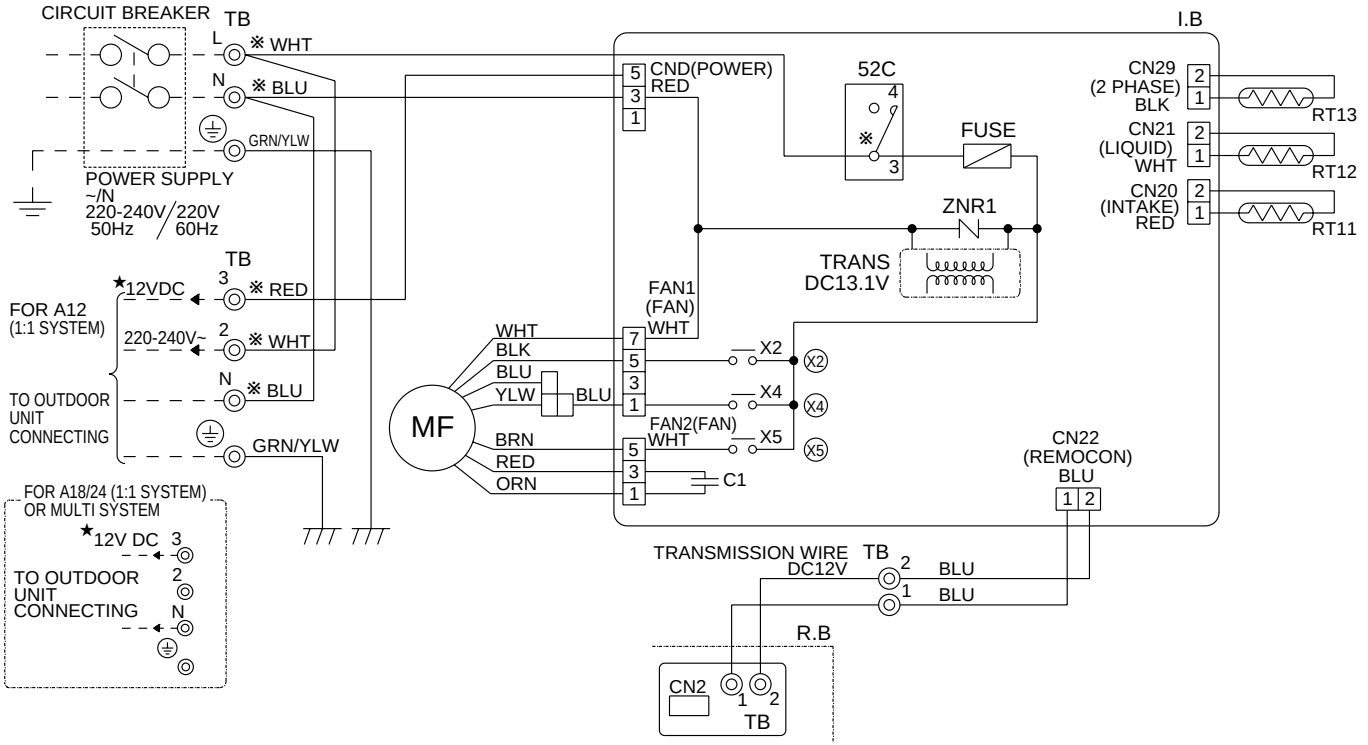
Unit : mm


Air inlet (rear side) dimensions
In case of bottom side suction, mount the PLATE (A) on the rear side.
After installation, remove the transportation support PLATE (B).
(Inlet size)
PLATE (B) ×2
24-φ2.9 holes
Air inlet (bottom side) dimensions
PLATE (A)
Air inlet (rear side)
※ Select the either back side or bottom side.
Electrical parts box
Access door
Service space
(It is necessary to maintain a working service area from the ceiling.)
Suspension bolt pitch
Air outlet duct flange
9×2-φ2.9 holes
Air outlet
Suspension bolt M10 or 3/8 (procure locally)
(1070)
(Suspension bolt pitch)
Air inlet (bottom side)
※ Select the either back side or bottom side.
Refrigerent pipe (gas)
Refrigerent pipe (liquid)
Terminal block
Wiring entry
2×2-φ2.9 holes
Air outlet duct flange
Drain plug R1 male

Models	Refrigerent pipe (liquid)	Refrigerent pipe (gas)
SEZ-A12AR	φ6.35mm flared connection 1/4F	φ9.52mm flared connection 3/8F
SEZ-A18AR	φ6.35mm flared connection 1/4F	φ12.7mm flared connection 1/2F
SEZ-A24AR	φ6.35mm flared connection 1/4F	φ15.88mm flared connection 5/8F

4 WIRING DIAGRAM

SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH



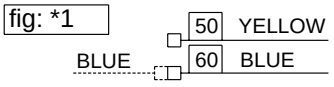
[LEGEND]

SYMBOL	NAME	SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD	MF	FAN MOTOR
		RT11	ROOM TEMPERATURE THERMISTOR
C1	FAN MOTOR CAPACITOR	RT12	PIPE TEMPERATURE THERMISTOR / LIQUID
FUSE	FUSE(3.15A)	RT13	CONDENSER / EVAPORATOR TEMPERATURE THERMISTOR
X2,X4,X5	RELAY(FAN MOTOR)	TB	TERMINAL BLOCK
ZNR1	VARISTOR	R.B	REMOTE CONTROLLER BOARD
52C	COMPRESSOR CONTACTOR		

★ The 12V DC is NOT always against the ground. Terminal 3 has 12V DC against terminal N. However, between 3 and 2, these terminals are NOT electrically insulated by the transformer or other device.

NOTES:

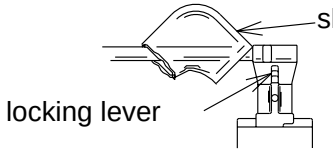
1.Since the indoor fan motor(MF) is connected with 50Hz power,if 60Hz power is used, change the wiring connection showing fig: *1
Indoor Fan Motor(MF) for 60Hz



2.About the outdoor side electric wiring refer to the outdoor unit electlic wiring diagram for servicing.
3.Use copper conductors only. (For field wiring)
4.Symbols below indicate.
◎: Terminal block ▭▭▭: Connector

How to remove the terminals shown at " ※ " mark.

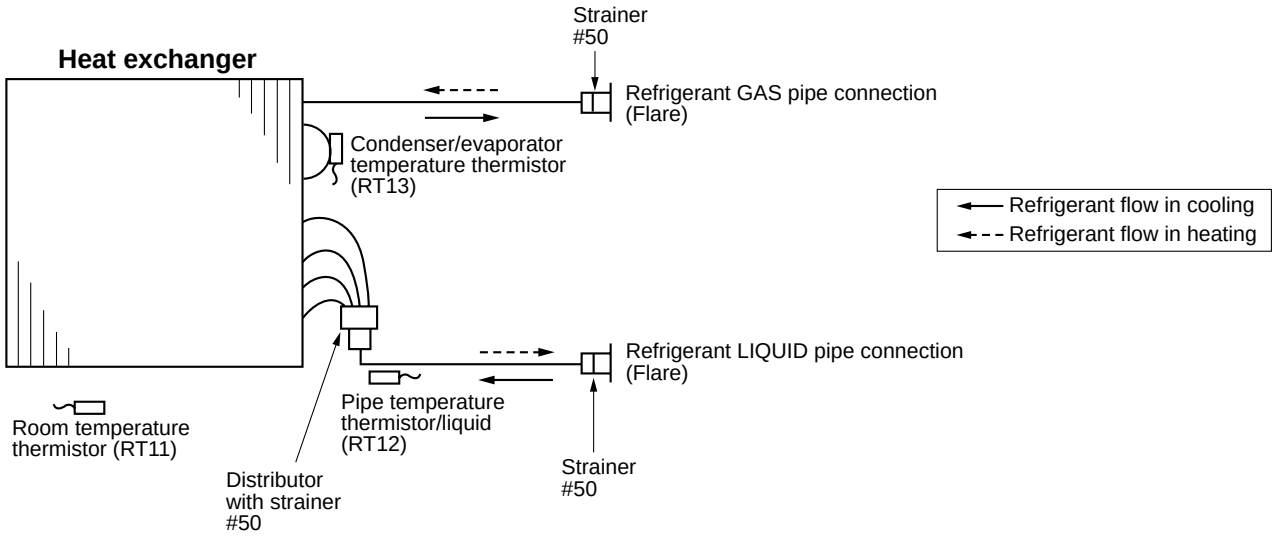
" ※ " shows the terminals with a lock mechanism, so they cannot be removed when you pull the lead wire. Be sure to pull the wire by pushing the locking lever (projected part) of the terminal with a finger.



①Slide the sleeve.
②Pull the wire while pushing the locking lever.

5 REFRIGERANT SYSTEM DIAGRAM

SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH



6 TROUBLESHOOTING

6-1. Cautions on troubleshooting

(1) Before troubleshooting, check the followings:

① Check the power supply voltage.

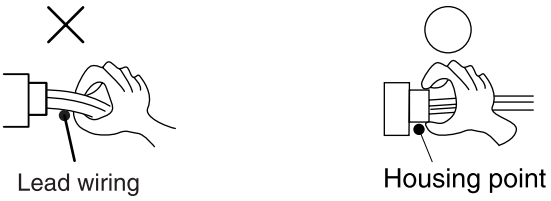
② Check the indoor/outdoor connecting wire for mis-wiring.

(2) Take care the followings during servicing.

① Before servicing the air conditioner, be sure to first turn off the remote controller to stop the main unit, and then turn off the breaker.

② When removing the indoor controller board, hold the edge of the board with care NOT to apply stress on the components.

③ When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.



6-2. Self-check function

Wired remote controller

(1) Turn on the power.

(2) Press the [CHECK] button twice.

(3) Set refrigerant address with [TEMP] button if system control is used.

(4) Press the [ON/OFF] button to stop the self-check.

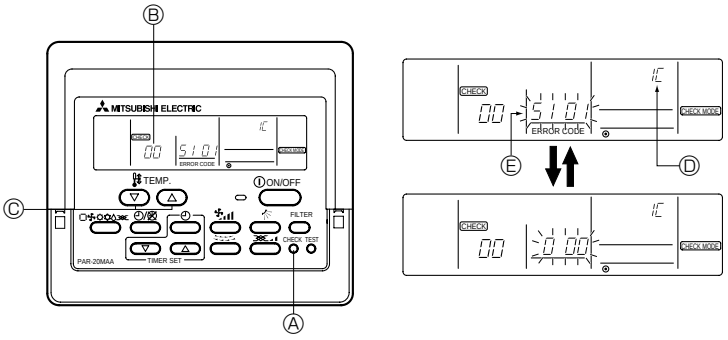
Ⓐ CHECK button

Ⓑ Refrigerant address

Ⓒ TEMP button

Ⓓ IC : Indoor unit
OC : Outdoor unit

Ⓔ Check code



• For description of each check code, refer to the following table.

① Check code	Symptom
5101	Room temperature thermistor error
5102	RT12, RT13, Outdoor thermistor error
2503	Drain sensor error
2502	Drain pump error
1503	Freezing safeguard operation
0405, 1501, 4210, 5102	Outdoor unit error
6831~6834	Signal error between remote controller and indoor units
6800	Communication error between indoor and outdoor units
– – – –	No alarm history
F F F F	No unit

• On wired remote controller

① Check code displayed in the LCD.

6-3. Trouble shooting

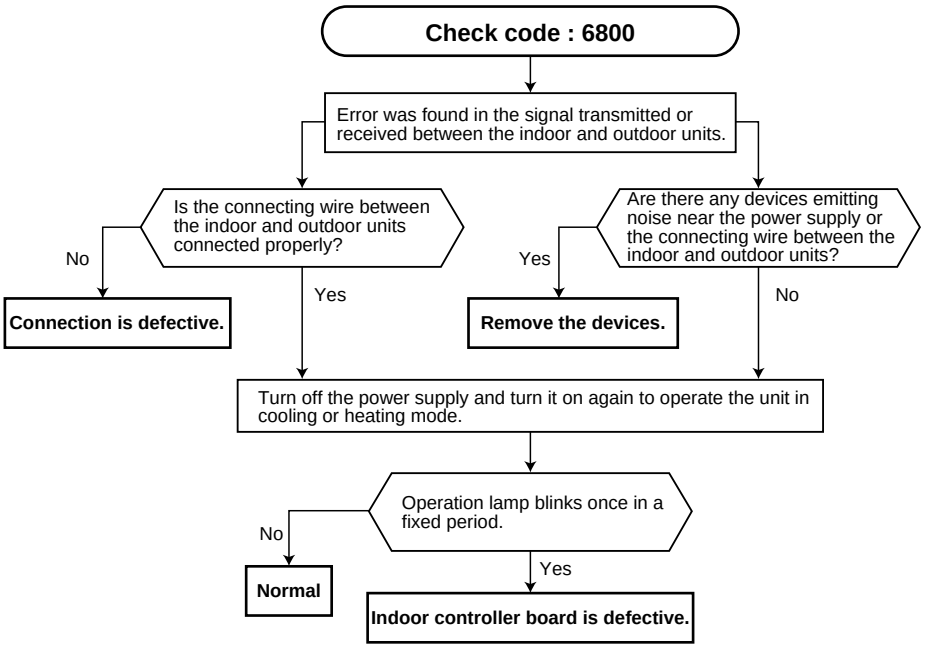
(1) In case of being indicated irregularity on the self diagnoses

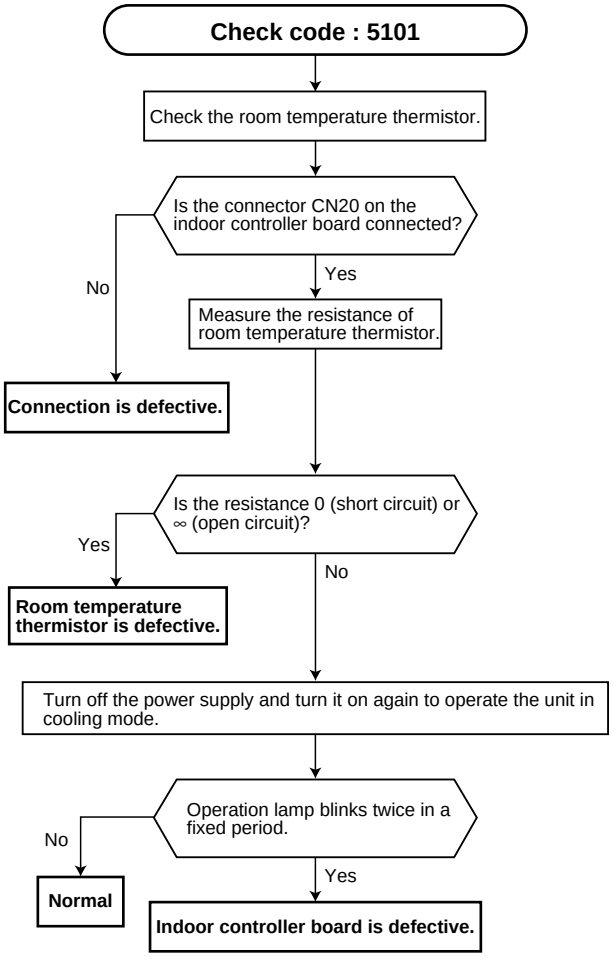
Check code	Phenomenon	Cause	Countermeasure
6800	Mis-wiring	Wiring between the indoor and outdoor is coming off.	Check the wiring out between the indoor and outdoor.
		Difference of wiring polarity between the indoor and outdoor.	
	Indoor-outdoor signal error	Trouble of the outdoor inverter P.C. board.	Check the outdoor inverter P.C. board. Refer to the TECHNICAL & SERVICE MANUAL of outdoor unit.
		Trouble of the Indoor controller board.	Exchange the Indoor controller board.
5102	Pipe temperature thermistor / Liquid.	Mis-connecting of the pipe temperature thermistor / Liquid.	Reinsert the connector (CN21).
		Trouble of the pipe temperature thermistor / Liquid.	Check the resistance value of the thermistor.
		Trouble of the Indoor controller board.	Exchange the Indoor controller board.
	Condenser / evaporator temperature thermistor	Mis-connecting of the condenser / evaporator temperature thermistor.	Reinsert the connector (CN29).
		Trouble of the condenser / evaporator temperature thermistor.	Check the resistance value of the thermistor.
		Trouble of the Indoor controller board.	Exchange the Indoor controller board.
	Outdoor thermistor	Mis-connecting of the outdoor thermistor.	Reinsert the connector.
		Trouble of the outdoor thermistor.	Check the resistance value of the thermistor.
		Trouble of the outdoor inverter P.C. board.	Exchange the outdoor inverter P.C. board.
5101	Room temperature thermistor	Mis-connecting of the room temperature thermistor.	Reinsert the connector (CN20).
		Trouble of the room temperature thermistor.	Check the resistance value of the thermistor.
		Trouble of the Indoor controller board.	Exchange the Indoor controller board.
1503	Freezing protection is working.	1) Short cycle of air cycle 2) Dirty air filter 3) Damaged fan 4) Abnormal refrigerant	1) Clear obstructions from air cycle. 2) Clean the air filter 3) Check the fan 4) Check the refrigerant temperature.
0405 1501 4210	Malfunction of outdoor unit	Malfunction of outdoor unit	Refer to the TECHNICAL & SERVICE MANUAL of outdoor unit.

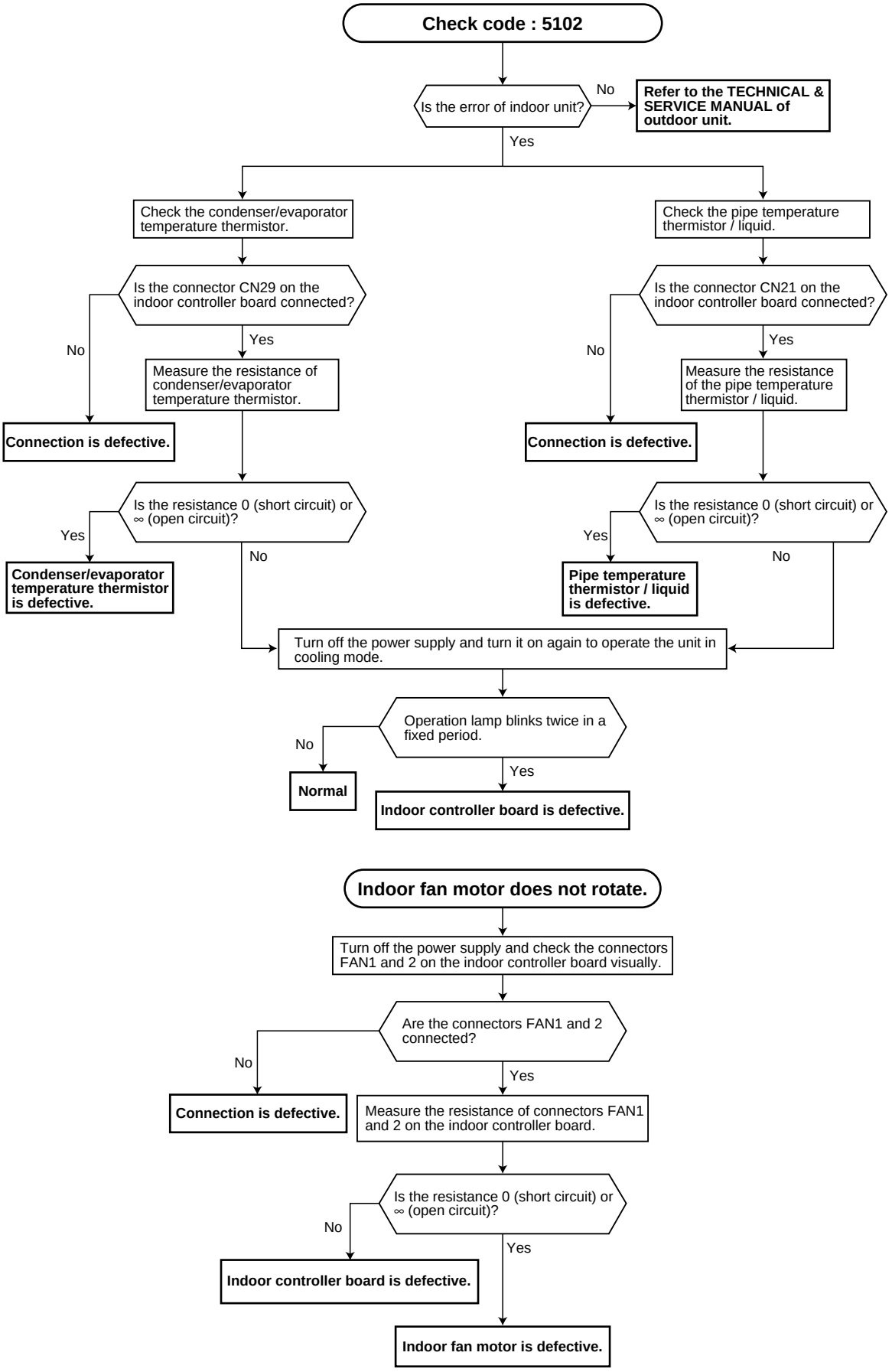
(2) Other case

Phenomenon	Cause	Countermeasure
Not working of remote controller switch ON/OFF	A connector attaching the panel to the body is not connected.	Connect it.
	Short circuit the protecting parts in the Indoor controller board.	Check the varistor (ZNR1) and fuse (FUSE) out in the Indoor controller board.
	Trouble of the Indoor controller board.	Check the Indoor controller board out.
	Wiring between the indoor and the wired remote controller is coming off.	Check the wiring between the Indoor and the wired remote controller.
	Trouble of the remote controller.	Exchange the remote controller.
Working the Indoor units and not working the outdoor units.	Wiring between the indoor and outdoor is coming off.	Check the wiring out between the indoor and outdoor.
	Difference of wiring polarity between the indoor and outdoor.	
	Trouble of the outdoor inverter P.C. board.	Check the outdoor inverter P.C. board.
	Trouble of the contactor (52C).	Exchange the contactor.
	Malfunction of outdoor unit.	Refer to the TECHNICAL & SERVICE MANUAL of outdoor unit.
Not rotating the fan in the indoor unit.	Fan motor connector is coming off.	Check the connector out.
	Trouble of the Indoor controller board.	Check the fan motor output of the Indoor controller board.
	Trouble of the fan motor.	Check the resistance value between the each tap of fan motor.
Horizontal vane doesn't work.	A connector attaching the panel to the body is not connected.	Connect it.
	Fixing of horizontal vane.	Check if the connector for vane motor is connected.

Check of indoor controller board and indoor fan motor

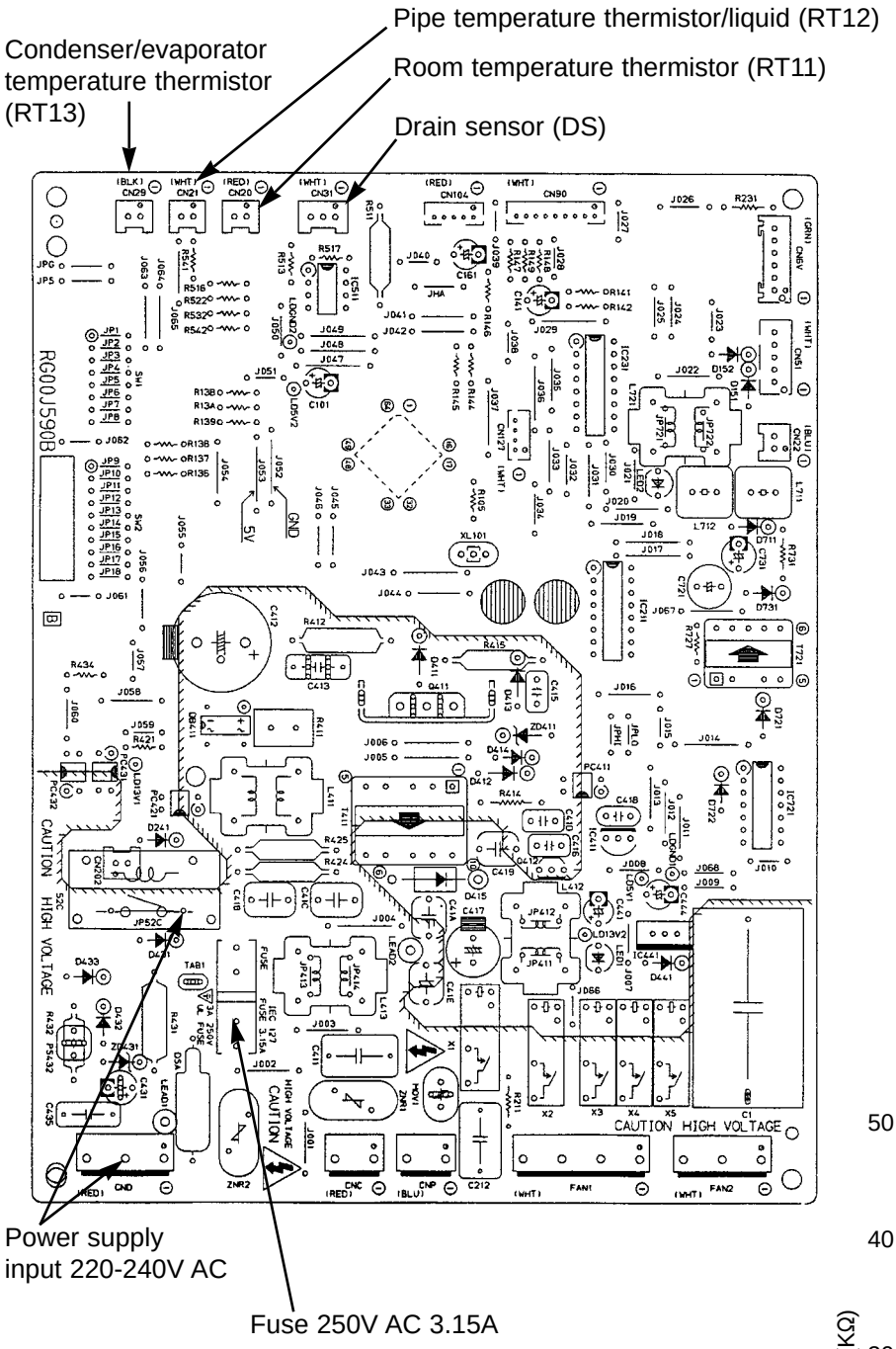

Check code : 6800
Error was found in the signal transmitted or received between the indoor and outdoor units.
Is the connecting wire between the indoor and outdoor units connected properly?
No
Connection is defective.
Yes
Are there any devices emitting noise near the power supply or the connecting wire between the indoor and outdoor units?
Yes
Remove the devices.
No
Turn off the power supply and turn it on again to operate the unit in cooling or heating mode.
Operation lamp blinks once in a fixed period.
No
Normal
Yes
Indoor controller board is defective.

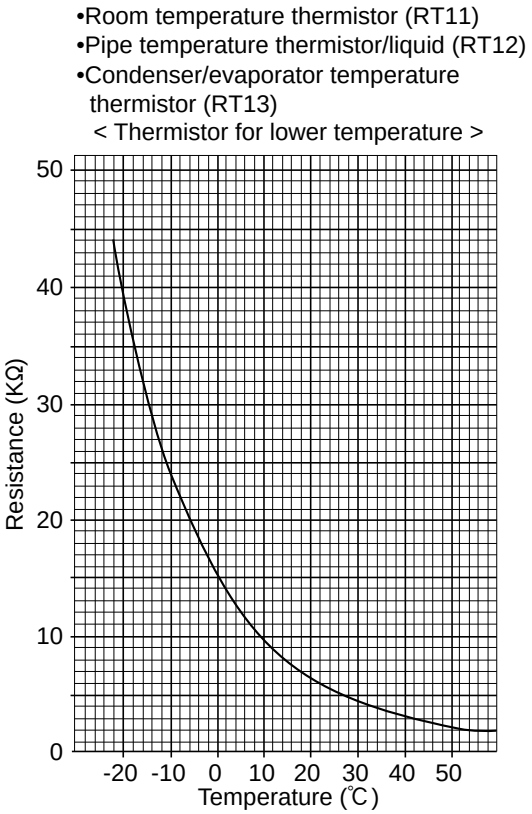

Check code : 5101
Check the room temperature thermistor.
Is the connector CN20 on the indoor controller board connected?
No
Connection is defective.
Yes
Measure the resistance of room temperature thermistor.
Is the resistance 0 (short circuit) or ∞ (open circuit)?
Yes
Room temperature thermistor is defective.
No
Turn off the power supply and turn it on again to operate the unit in cooling mode.
Operation lamp blinks twice in a fixed period.
No
Normal
Yes
Indoor controller board is defective.


Check code : 5102
Is the error of indoor unit?
No
Refer to the TECHNICAL & SERVICE MANUAL of outdoor unit.
Yes
Check the condenser/evaporator temperature thermistor.
Check the pipe temperature thermistor / liquid.
Is the connector CN29 on the indoor controller board connected?
Is the connector CN21 on the indoor controller board connected?
No
Yes
Measure the resistance of condenser/evaporator temperature thermistor.
Measure the resistance of the pipe temperature thermistor / liquid.
Connection is defective.
Connection is defective.
Is the resistance 0 (short circuit) or ∞ (open circuit)?
Is the resistance 0 (short circuit) or ∞ (open circuit)?
Yes
No
Condenser/evaporator temperature thermistor is defective.
Pipe temperature thermistor / liquid is defective.
Turn off the power supply and turn it on again to operate the unit in cooling mode.
Operation lamp blinks twice in a fixed period.
Normal
Indoor controller board is defective.
Indoor fan motor does not rotate.
Turn off the power supply and check the connectors FAN1 and 2 on the indoor controller board visually.
Are the connectors FAN1 and 2 connected?
Connection is defective.
Measure the resistance of connectors FAN1 and 2 on the indoor controller board.
Indoor controller board is defective.
Indoor fan motor is defective.

6-4. Test point of indoor controller board

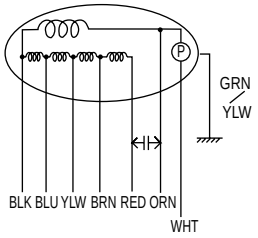
Indoor controller board


Condenser/evaporator temperature thermistor (RT13)
Pipe temperature thermistor/liquid (RT12)
Room temperature thermistor (RT11)
Drain sensor (DS)
Power supply input 220-240V AC
Fuse 250V AC 3.15A



6-5. Trouble criterion of main parts

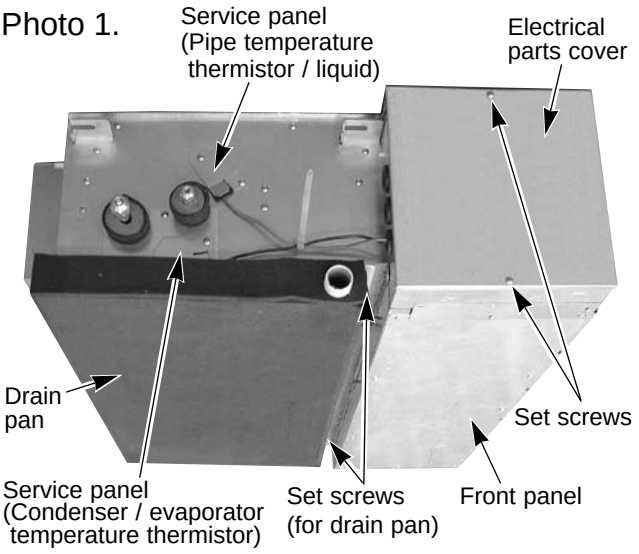
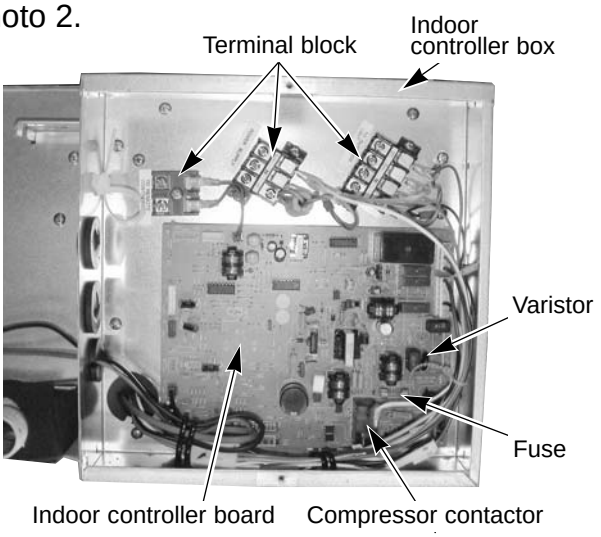
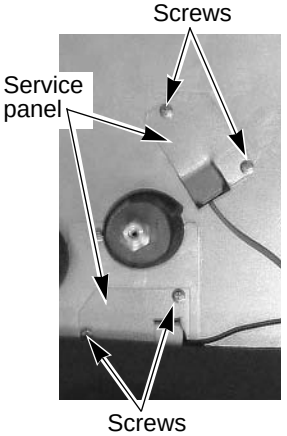
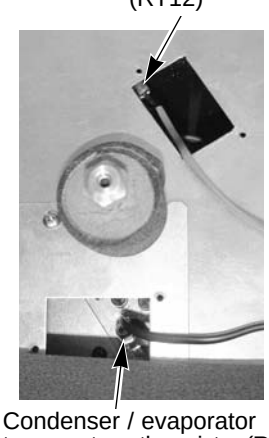
SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH

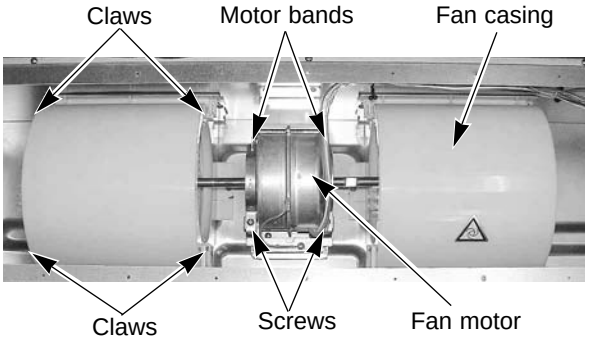
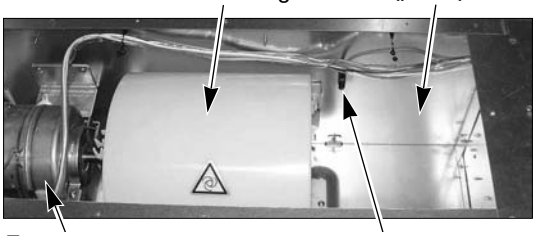
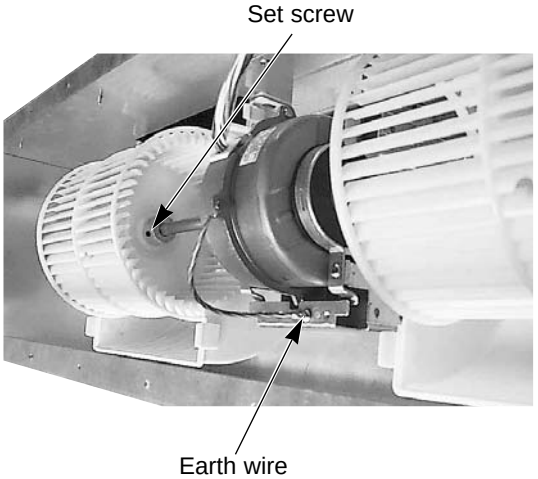
<table>
<tr><th>Part name</th><th>Check method and criterion</th></tr>
<tr><td>Room temperature thermistor (RT11)
Pipe temperature thermistor/liquid (RT12)
Condenser/evaporator temperature thermistor (RT13)</td><td>Measure the resistance with a tester.
(Part temperature 10°C ~ 30°C)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>8kΩ~20kΩ</td><td>Opened or short-circuited</td></tr></table></td></tr>
<tr><td>Indoor fan motor (MF)
 

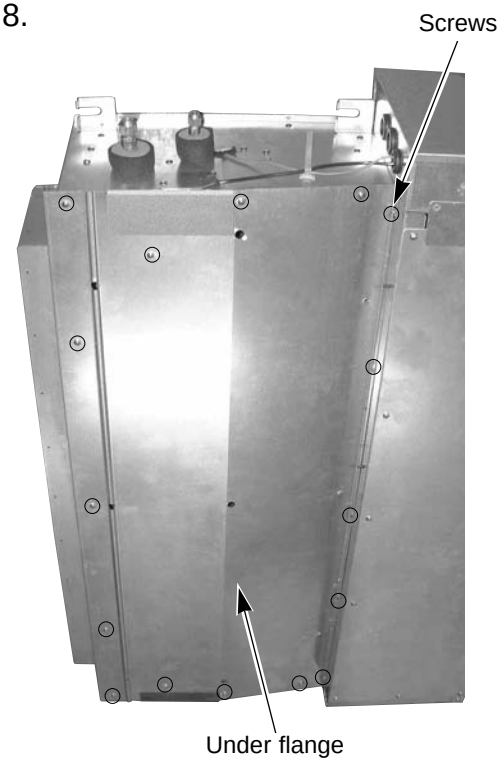
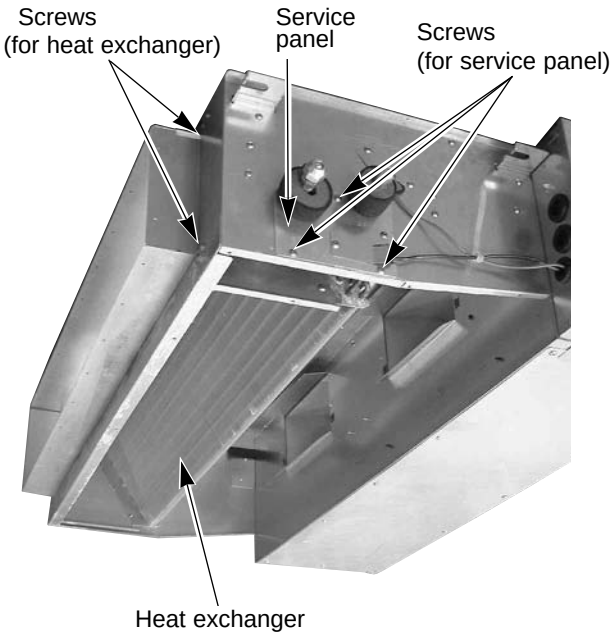
Ⓟ : Thermal fuse
145 ± 2˚C</td><td>Measure the resistance between the terminals with a tester.
(Coil wiring temperature 10°C ~ 30°C)
<table><tr><th></th><th colspan="3">Normal</th><th rowspan="2">Abnormal</th></tr><tr><th></th><th>A12AR</th><th>A18AR</th><th>A24AR</th></tr><tr><td>WHT-BLK</td><td>241.4~261.2Ω</td><td>155.5~168.2Ω</td><td>97.0~105Ω</td><td rowspan="5">Opened or short-circuited</td></tr><tr><td>BLK-BLU</td><td>19.0~20.6Ω</td><td>48.3~52.3Ω</td><td>53.8~58.3Ω</td></tr><tr><td>BLU-YLW</td><td>25.4~27.5Ω</td><td>17.8~19.4Ω</td><td>14.0~15.3Ω</td></tr><tr><td>YLW-BRN</td><td>12.6~13.7Ω</td><td>7.6~8.3Ω</td><td>6.3~6.9Ω</td></tr><tr><td>BRN-RED</td><td>47.9~51.9Ω</td><td>37.6~40.7Ω</td><td>27.0~29.3Ω</td></tr></table></td></tr>
</table>

7 DISASSEMBLY PROCEDURE

SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH

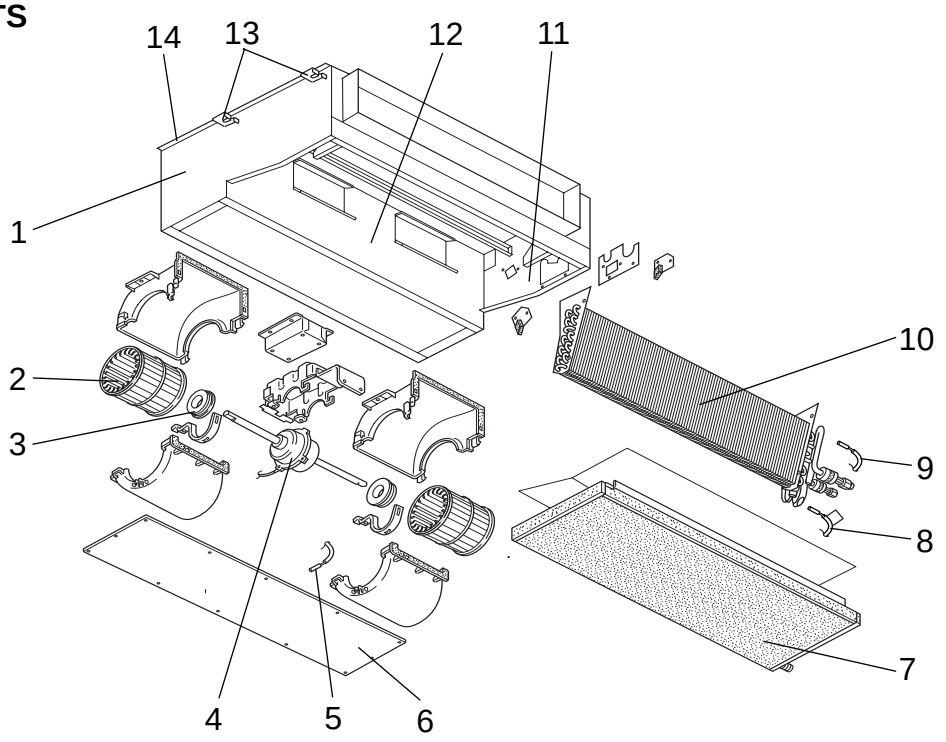
OPERATING PROCEDURE	PHOTOS
1. Removing the electrical parts (1) Remove the 2 screws and the electrical parts cover. (See Photo 1.) ● Indoor controller board (I.B) ● Compressor contactor (52C) ● Fuse (FUSE) ● Varistor (ZNR1) ● Terminal block (TB) (See Photo 2.)	Photo 1. 
2. Removing the pipe temperature thermistor (RT12) (1) Remove the electrical parts cover. (Refer to **1**.) (2) Remove the 2 screws and the service panel. (See Photo 3.) (3) Remove the thermistor (RT12) from the holder. (See Photo 4.) (4) Remove the connector (CN21) from the indoor controller board and pull the white wire of thermistor (RT12) out.	Photo 2. 
3. Removing the condenser / evaporator temperature thermistor (RT13) (1) Remove the electrical parts cover. (Refer to **1**.) (2) Remove the 2 screws and the service panel. (See Photo 3.) (3) Remove the thermistor (RT13) from the holder. (See Photo 4.) (4) Remove the connector (CN29) from the indoor controller board and pull the black wire of thermistor (RT13) out.	Photo 3.  Photo 4. 

OPERATING PROCEDURE	PHOTOS
4. Removing the room temperature thermistor (RT11) (1) Remove the electrical parts cover. (Refer to **1**.) (2) Remove the front panel at fan side. (12 screws) (See Photo 1.) (3) Remove the thermistor (RT11) from the separator (panel). (See Photo 6.) (4) Disconnect the connector (CN20)from the indoor controller board and pull the lead wire of thermistor (RT11) out.	Photo 5.  Photo 6. 
5. Removing the sirocco fan and the fan motor (MF). (1) Remove the electrical parts cover. (Refer to **1**.) (2) Remove the front panel at fan side.(12 screws) (See Photo 1.) (3) Disconnect the fan motor connector (FAN1, FAN2) from the indoor controller board. (See Photo 2.) (4) Undo the 4 claws and remove the fan claws.(down side) <Either left or right> (See Photo 5.) (5) Remove the motor bands. <A screw each on left and right.> (See Photo 5.) (6) Disconnect the earth wire from the fan motor leg. (See Photo 7.) (7) Remove the fan motor and the sirocco fan by assembly. (See Photo 7.) (8) Unscrew the setting screw and remove the sirocco fan. <Either left or right> (See Photo 7.)	Photo 7. 

OPERATING PROCEDURE	PHOTOS
6. Removing the drain pan (1) Unscrew each set screw on the right and left, and remove the drain pan pushing it toward the the back. (See Photo 1.)	Photo 8. 
7. Removing the heat exchanger (1) Remove the drain pan. (Refer to **1**.) (2) Remove the Under flange at heat exchanger side. (16 screws) (See Photo 8.) (3) Remove the 4 screws of heat exchanger.(2 screws each on left and right) (See Photo 9.) (4) Remove the thermistor (RT12) from the holder. (Refer to **2**.) (5) Remove the thermistor (RT13) from the holder. (Refer to **3**.) (6) Remove the service panel.(3 screws) (See Photo 9.) (7) Put the heat exchanger down to the fan motor and pull it toward you. (See Photo 9.)	Photo 9. 

8 PARTS LIST

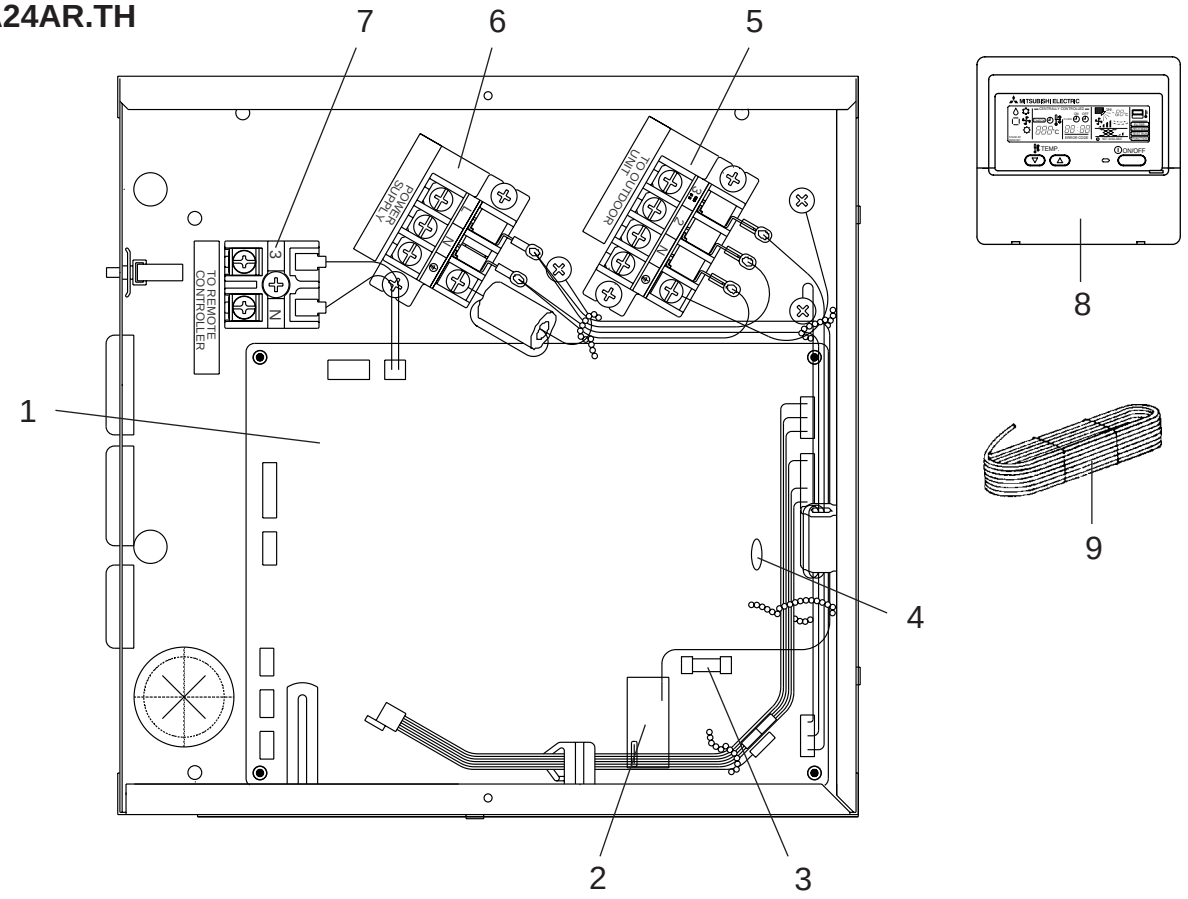
INDOOR UNIT
STRUCTURAL PARTS
SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH



Part number that is circled is not shown in the illustration.

No.	Parts No.	Parts name	Specification	Q'ty/set SEZ- A12AR.TH	Q'ty/set SEZ- A18AR.TH	Q'ty/set SEZ- A24AR.TH	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	E07 039 086	LEFT SIDE PANEL		1	1	1					
2	E07 039 500	SIROCCO FAN		2	2	2					
3	E02 179 505	FAN MOTOR RUBBER MOUNT		2	2	2	<2PCS/SET>				
4	E07 039 300	FAN MOTOR	PK6V19-EF	1				MF			
	E07 040 300	FAN MOTOR	PK6V32-EF		1			MF			
	E07 041 300	FAN MOTOR	PK6V50-EF			1		MF			
5	E07 143 308	ROOM TEMPERATURE THERMISTOR		1	1	1		RT11			
6	E07 039 000	FRONT PANEL		1	1	1					
7	E07 039 700	DRAIN PAN		1	1	1					
8	E07 143 309	CONDENSER / EVAPORATOR TEMPERATURE THERMISTOR		1	1	1		RT13			
9	E07 136 307	PIPE TEMPERATURE THERMISTOR / LIQUID		1	1	1		RT12			
10	E07 143 620	INDOOR HEAT EXCHANGER		1							
	E07 144 620	INDOOR HEAT EXCHANGER			1						
	E07 145 620	INDOOR HEAT EXCHANGER				1					
11	E07 143 085	RIGHT SIDE PANEL		1	1	1					
12	E07 143 293	SEPARATOR ASSY		1	1	1					
13	E07 039 809	LEFT LEG		2	2	2					
14	E07 039 290	BASE		1	1	1					
(15)	E07 039 808	RIGHT LEG		2	2	2					

INDOOR UNIT
ELECTRICAL PARTS
SEZ-A12AR.TH
SEZ-A18AR.TH
SEZ-A24AR.TH



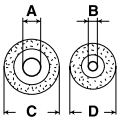
Part numbers that is circled is not shown in the illustration.

No.	Parts No.	Parts name	Specification	Q'ty/set SEZ- A12AR.TH	Q'ty/set SEZ- A18AR.TH	Q'ty/set SEZ- A24AR.TH	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	E07 143 447	INDOOR CONTROLLER BOARD		1				I.B			
	E07 144 447	INDOOR CONTROLLER BOARD			1			I.B			
	E07 145 447	INDOOR CONTROLLER BOARD				1		I.B			
2	E07 140 340	COMPRESSOR CONTACTOR		1	1	1		52C			
3	E02 127 382	FUSE	250/3.15A	1	1	1		FUSE			
4	E02 661 385	VARISTOR		1	1	1		ZNR1			
5	E02 257 375	TERMINAL BLOCK	4P	1	1	1		TB			
6	E02 367 377	TERMINAL BLOCK	3P	1	1	1		TB			
7	E02 007 375	TERMINAL BLOCK	2P	1	1	1		TB			
8	E07 136 426	REMOTE CONTROLLER		1	1	1		R.B			
9	E07 018 089	REMOTE CONTROLLER CABLE		1	1	1					
(10)	E07 039 449	CONTROLLER COVER		1	1	1					

9 OPTIONAL PARTS

9-1. REFRIGERANT PIPES

The air conditioner has flared connections its indoor and outdoor sides.
Please use the optional extension pipe as follows.

Applied unit	Models	Pipe length	Pipe size O.D.mm (in.)					Additional refrigerant charge R410A (g)
			Cross-section	A-Gas	B-liquid	Insulation		
						C	D	
SEZ-A12AR.TH	MAC-680PI	3m		ϕ9.52 (3/8)	ϕ6.35 (1/4)	ϕ27	ϕ21	0
	MAC-681PI	5m						60
	MAC-682PI	7m						150
	MAC-683PI	10m						300
	MAC-684PI	15m						
SEZ-A18AR.TH	MAC-670PI	3m		ϕ12.7 (1/2)		ϕ31	ϕ27	0
	MAC-671PI	5m						40
	MAC-672PI	7m						100
	MAC-673PI	10m						200
	MAC-674PI	15m						
SEZ-A24AR.TH	MAC-860PI	3m		ϕ15.88 (5/8)				0
	MAC-861PI	5m						40
	MAC-862PI	7m						100
	MAC-863PI	10m						200
	MAC-864PI	15m						

9-2. AIR FILTER

Applied unit	Models
SEZ-A12AR.TH SEZ-A18AR.TH SEZ-A24AR.TH	PAC - 1000 FT

Mr.SLIM™

MITSUBISHI ELECTRIC CORPORATION
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